

**WHAT IS CLAIMED IS:**

- 1 1. A method of comprising the steps of:  
 2 providing a portion of data in response to a counter value being reached, wherein the  
 3 counter value is stored in a counter that is being incremented at a predetermined  
 4 rate;  
 5 determining a current bit rate;  
 6 determining an desired bit rate over an amount of time;  
 7 determining a running average based on the current bit rate and the desired bit rate,  
 8 wherein the running average is further based on a difference between a plurality of  
 9 desired bit rates and current bit rates; and  
 10 setting the counter value based on the running average.
- 1 2. The method of claim 1, wherein the steps of determining and setting are repeated at a  
 2 predetermined interval rate.
- 1 3. The method of claim 2, wherein the predetermined interval less than approximately 150  
 2 milliseconds.
- 1 4. The method of claim 2, wherein the predetermined interval less than approximately 10  
 2 milliseconds.
- 1 5. The method of claim 1, wherein the step of setting the counter value includes using the  
 2 running average to access a counter value stored in a table.
- 1 6. The method of claim 1, wherein the step of setting the counter value includes using the  
 2 running average in an equation to determine the counter value.

1 7. The method of claim 1, wherein the data is a portion of a packetized multimedia data  
2 stream.

1 8. The method of claim 1, wherein the portion of data is a data word having a predetermined  
2 width.

1 9. The method of claim 1, wherein the counter value is stored in a register of first data  
2 processor, and step of setting the counter is performed by a host data processor that is  
3 different than the first data processor.

1 10. The method of claim 1 further including the step of initializing the counter value to a first  
2 count based on a calculated time difference, wherein the calculated time difference is  
3 based on clock values stored in the data.

1 11. The method of claim 10, wherein the first count is further based upon an amount of data  
2 stored between the clock values used to determine the time difference.

1 12. The method of claim 10, wherein the step of providing includes providing the portion of data  
2 to an MPEG audio decoder.

1 13. The method of claim 10, wherein the step of providing includes providing the portion of data  
2 to the MPEG video decoder.

1 14. A method of comprising the steps of:  
 2 reading a portion of data in response to a counter value being reached, wherein the  
 3 counter value is stored in a counter that is being incremented at a predetermined  
 4 rate;  
 5 determining a current bit rate;  
 6 determining an desired bit rate over an amount of time;  
 7 determining a difference between the current bit rate and the desired bit rate (current bit  
 8 rate-desired bit rate); and  
 9 increasing the counter value when the difference is greater than a predefined value;  
 10 decreasing the counter value when the difference is negative.

1 15. The method of claim 14, wherein the data is a portion of a packetized multimedia data  
 2 stream.

1 16. The method of claim 14, wherein the portion of data is a data word having a  
 2 predetermined width.

1 17. The method of claim 14, wherein the step of setting the counter is repeated at a rate less  
 2 than the predetermined amount of time.

1 18. The method of claim 14, wherein the step of setting the counter occurs at a repeated interval.

1 19. A system comprising:  
 2 a system bus port to couple to a system bus;  
 3 a system clock;  
 4 a memory configured as a first in first out memory (FIFO) coupled to the data holding  
 5 register;  
 6 a first register coupled to the memory to store a current write location of the first  
 7 memory;  
 8 a second register coupled to the memory to store a current read location of the first  
 9 memory; and  
 10 a leak rate controller coupled to the memory to control a rate at which data is read from  
 11 the memory, the leak rate controller further includes  
 12 a data rate monitor to determine a current data rate;  
 13 a counter coupled to the system clock to provide a read signal when a predefined value is  
 14 met, wherein the read signal accesses data stored in the memory.

1 20. The system of claim 19, wherein the leak rate controller further includes a filter coupled to  
 2 the data rate monitor to determine a running average of a difference between the current data  
 3 rate and a desired data rate.

1 21. The system of claim 19 further comprising an audio decoder coupled to the memory.

1 22. The system of claim 20 further comprising a video decoder coupled to the memory.

1 23. The system of claim 19 further comprising a video decoder coupled to the memory.